International Bureau



(43) International Publication Date 21 July 2005 (21.07.2005)

PCT

(10) International Publication Number WO 2005/066155 A1

(51) International Patent Classification7: C07D 401/04, 213/84, A61K 31/4439, A61P 25/04

(21) International Application Number:

PCT/US2004/041401

(22) International Filing Date:

13 December 2004 (13.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/530,633

19 December 2003 (19.12.2003)

(71) Applicants (for all designated States except US): AS-TRAZENECA AB [SE/SE]; SE-151 85 Södertälje. S-SE-151 Södertälje (SE). NPS PHARMACEUTICALS, INC. [US/US]; 420 Chipeta Way, Salt Lake City, Utah 84108 (US).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): WENSBO, David [SE/SE]: c/o AstraZeneca R & D Headquaters, Global Intellectual Property, SE-151 85 Södertälje, S-SE-151 Södertälje (SE). EDWARDS, Louise [CA/CA]; 871 Chippenham Drive, Mississauga, Ontario L5H 3S6 (CA). ISAAC, Methvin [CA/CA]; 2101 Islington Avenue, Apt. #2105, Etobicoke, Ontario M9P 3R2 (CA). MCLEOD, Donald A. [US/US]; 7740 South Newport Way, Salt Lake city, Utah 84121 (US). SLASSI, Abdelmalik [CA/CA]; 4780 Fulwell Road, Mississauga, Ontario L5M 7J7 (CA). XIN, Tao [CA/CA]: 10 Comoq Ave., Woodbridge, Ontario L4H 2B1 (CA). STORMANN, Thomas M. [US/US]: 1327 East Harrison, Salt Lake City, Utah 84105 (US).
- Agents: BENT, Stephen A. et al.; Foley & Lardner LLP. Washington Harbour, 3000 K Street, NW, Suite 500, Washington, District of Columbia 20007 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE. AG. AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG. KP, KR, KZ. LC, LK, LR, LS, LT, LU, LV, MA, MD. MG, MK, MN. MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ. UA, UG, US, UZ. VC, VN, YU, ZA, ZM, ZW.

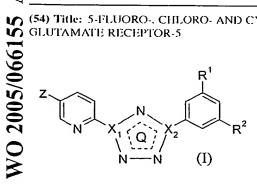
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR). OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE. AG, AL, AM, AT AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG. ES. F1. GB. GD. GE. GH. GM. HR. HU. ID. IL., IN. IS. JP. KE. KG. KP. KR. KZ. LC. LK. LR. LS. LT. LU. LV. MA. MD. MG. MK. MN. MW. MX. MZ, NA. NI. NO. NZ, OM. PG. PH. PL. PT. RO. RU. SC. SD. SE. SG. SK. SL. SY, TJ. TM. TN. TR. TT. TZ. UA. UG. UZ. VC. VN. YU. ZA. ZM. ZW. ARIPO patent (BW. GH, GM, KE, LS, MW, MZ, NA, SD. SL. SZ. TZ. UG. ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE. IS. IT. LT. LU. MC. NL. PL. PT. RO. SE. SI. SK. TR). OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML. MR. NE. SN. TD. TG)
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG. ES. FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS. JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA. MD. MG. MK. MN. MW. MX. MZ. NA. NI. NO. NZ. OM. PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,

[Continued on next page]

(54) Title: 5-FLUORO-, CHILORO- AND CYANO-PYRIDIN-2-YL-TETRAZOLES AS LIGANDS OF THE METABOTROPIC



(57) Abstract: The present invention relates to new compounds of formula I. wherein Z. Q. X1, X2, R1 and R2, are as defined as in formula I, or salts, solvates or solvated salts thereof, processes for their preparation, pharmaceutical formulations containing said compounds and to the use of said compounds in therapy.

TM. TN. TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

March 1964 To Ton The March 1966